

We've finished the April 1, 2015 Water Supply Index (WSI) and Bulletin 120 (B120) forecasts. The forecasts include observed conditions through the end of March. The forecasts are posted at:

WSI: <http://cdec.water.ca.gov/cgi-progs/iodir/wsi>  
 B120: <http://cdec.water.ca.gov/cgi-progs/iodir?s=b120>

#### **Forecast Summary:**

The projected median April-July runoff in the major Sierra river basins ranges from 6 percent on the Tule River to 54 percent on the Pit River. Forecasted median Water Year runoff in the Sierra ranges from 8 percent for the Tule River to 64 percent for the Sacramento River above Bend Bridge.

Through six months of this water year, the extraordinary drought continues due to record low snowpack and, in some cases, no snow at a time when near maximum accumulation is the norm. The storm window is still open. But, based on historical trends, only about 17 percent of the Water Year's precipitation is expected after March 31.

The WSI forecast is based on precipitation and flows observed through March 2015 and can be summarized as follows:

<b>Sacramento River Unimpaired Runoff Water Year Forecast</b> (50 percent exceedance)	<b>9.5 MAF</b> <b>(52 percent of average)</b>
<b>Sacramento Valley Index (SVI)</b> (50 percent exceedance)	<b>4.1</b> <b>(Critical)</b>
<b>San Joaquin Valley Index (SJI)</b> (75 percent exceedance)	<b>0.7</b> <b>(Critical)</b>

#### **Runoff:**

Unimpaired flows for the 2014-15 water year have run at the following rates of average:

<b>Region</b>	<b>October - March Runoff (%)</b>	<b>March Runoff (%)</b>
Sacramento Valley Index (4 rivers)	<b>63</b>	<b>24</b>
San Joaquin Valley Index (6 rivers)	<b>35</b>	<b>24</b>
Tulare Lake Basin (4 rivers)	<b>29</b>	<b>26</b>

#### **Precipitation:**

Precipitation for the 2014-15 water year accumulated at the following rates of average:

<b>Region/Index</b>	<b>WY accumulated Precipitation through March 31, 2015</b> <b>units= percent of average</b>
Sacramento River	<b>75</b>
San Joaquin River	<b>57</b>
Tulare Lake	<b>52</b>
Statewide	<b>73</b>

Northern Sierra 8-Station Index	76 (31.7 inches)
San Joaquin 5-Station Index	41 (13.7 inches)
Tulare Lake 6-Station Index	43 (10.3 inches)

Considering the three precipitation indexes above, the average Sierra precipitation for March was about 9 percent of average.

#### Snowpack:

Snowpack is monitored using two complementary methods: automatic snow sensor (or “pillow”) readings and manual snow course measurements. The snow sensors give us a daily snapshot of snow conditions while the manual snow course measurements provide a monthly verification of snow conditions in locations where snow has been measured in the same manner as far back as 100 years.

The snowpack as of the morning of April 1 and April 8, 2015 stands at the following (based on snow sensors):

Region	Snow Water Equivalent (inches, April 1)	% of Average (Apr. 1)	Snow Water Equivalent (inches, April 8)	% of Average (April 8)
Northern	1.4	5	2.5	8
Central	1.5	5	2.5	8
Southern	1.3	5	1.8	7
Statewide	1.4	5	2.3	8

When looking at manual snow course data, the results of the April 1 snow surveys show that the Statewide snowpack will be the lowest in the historic record going back to 1950. A total of 155 measured snow courses reported zero snow at a time when the snow pack is supposed to be near its peak. The following table compares the April 2015 snow survey results to those in April 1977 and April 2014.

Region	1977 % Average April	2014 % Average April	2015 % Average April
North Coast	39	9	3
Sacramento	27	19	2
San Joaquin Valley	22	33	6
Tulare Lake	19	28	5
North Lahontan	32	27	9
South Lahontan	25	39	7
<b>Statewide Average (weighted)</b>	<b>25</b>	<b>25</b>	<b>5</b>

 Lowest on record

**Weather and Climate Outlooks:**

The six-day weather forecast indicates no precipitation is expected during the first five days of the forecast. Less than 0.3 inches of precipitation is expected over the northern and central Sierra on Monday. Freezing levels during the six-day forecast will be at their lowest today near 5,500 feet and increasing up to above 9,500 feet by Sunday. They will then drop to near 6,500 feet in the northern Sierra, near 7,500 feet in the central Sierra, and near 8,500 feet in the southern Sierra.

The NWS Climate Prediction Center (CPC) one-month outlook for April, issued March 31, indicates equal chances of above or below normal precipitation Statewide. The same outlook predicts increased chances of above normal temperature for the majority of the State with the exception of northeast corner of the State.

The CPC three-month (April-May-June) outlook, issued March 19, indicates equal chances of above or below normal precipitation for the majority of the State. The same outlook predicts increased chances of above normal precipitation along the California-Arizona border. The three month outlook also predicts increased chances of below normal precipitation in the far northwest corner of the State. The three-month outlook indicates increased chances of above normal temperature Statewide.

El Niño conditions are present. Positive equatorial sea surface temperature (SST) anomalies continue across most of the Pacific Ocean. There is an approximately 50-60 percent chance that El Niño conditions will continue through the Northern Hemisphere summer 2015.

**Next Update:**

A Bulletin 120 update for conditions as of April 14 will be available Thursday, April 16.

The Bulletin 120 and Water Supply Index forecasts for conditions on May 1, 2015 will be available on Friday, May 8.

If you have any questions regarding this forecast, please contact a member of the Snow Surveys staff.